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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,037	03/08/2000	Pawan R. Gupta	MOF-11	1918

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EXAMINER

MARTIR, LILYBETT

ART UNIT PAPER NUMBER

2855

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/521,037	GUPTA, PAWAN R.	
	Examiner	Art Unit	
	Lilybett Martir	2855	<i>pw</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-3,5-10,12-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-10,12-14 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,5,7,9-10,19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proceq (Wire Tension Meter SM 55C1/SM 150C1) in view of Kamibashi (JP 08178770A) and further in view of Stein (Pat. 3,203,235).

- With respect to claims 1,8,19 and 20, Proceq teaches a frame having a pair of ends adapted to receive and support the stressed cable, each said end facing away from said frame and biasing the cable away from the frame; mounted on said frame between its ends, said Sack being configured for applying a pulling force on the stressed cable; and a jack linear deflection measuring means on said frame as noted in the Figure of Page 1, for measuring the linear deflection of the stressed cable (See **Measuring** in Page 1). Proceq does not specifically teach the utilization of notched ends and a hydraulic Jack. Kamibashi teaches that the utilization of hydraulic Jacks to apply a force in tension measuring devices is well known (See Constitution). Stein teaches that utilizing notched ends 16 and 17 facing away from the frame 12 as noted in Figure 1. It would have been obvious at the time the invention was made

to a person having ordinary skill in the art to modify the Wire Tension Meter of Proceq utilizing the teachings of the tension measuring device of Kamibashi to make said metering device more efficient and reliable in a well known manner, and further utilizing the teachings of the tensiometer of Stein to secure the cable whose tension is being measured in an efficient, reliable and well known manner by providing it with more grip.

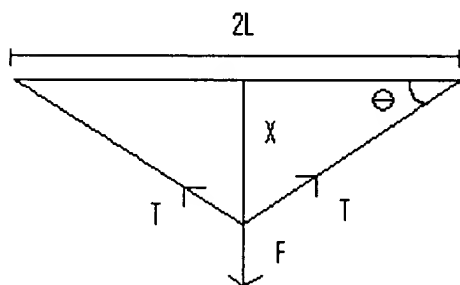
- With respect to claims 5 and 9, Proceq teaches the jack applying a pre-set force to the stressed cable as noted in the top Figure in Page 2 ("Wire force remains unchanged...").
- With respect to claim 7, Proceq teaches a frame having the shape of a "V" as noted in the Figure of Page 1.
- With respect to claim 10, It can be found from simple mathematical calculations utilizing the commonly known SOH- CAH- TOA and commonly known physics equations for Tension that when a string of length $2L$ is stretched between two fixed points with a tension T and force F is applied at mid span normal to the string, where the string deflection under the force is x , that a relation between F and x/L exists, assuming that T remains constant even though the string is stretching and that the displacement x is small relative to the string length. (Consider equilibrium of the midpoint of the string where the force F is applied). At this point we have three forces acting; the tension in the

string on either side of the point and the force F . Now, assuming the displacement of the center of the string is small relative to the string length, the angle of the string is simply the slope of the string.

$$\sin\theta \approx \theta \approx \tan\theta \text{ and } \theta \approx x/L$$

Therefore it can be concluded by equating forces that:

$$F = 2 T \sin\theta \text{ or that } F = 2 T (x/L) \text{ or that } T = F / (2 \sin\theta)$$



Proceq and Kamibayashi disclose the measurement of tension in a wire that is being deflected but they fail to disclose the involved equations utilized in said process. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize commonly known physics and mathematical equations such as the ones disclosed above to further obtain reliable values that are both accurate and reliable.

3. Claims 2-3,6,12-14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proceq (Wire Tension Meter SM 55C1/SM 150C1) in view of Kamibashi and Stein as applied to claim 1, and further in view of Grade et al. (Pat. 4,423,639).

- With respect to claims 2 and 3, Proceq as above modified fails to specifically teach the utilization of a hook means, said hook connected to said jack and adapted for engagement with said stressed cable, wherein the force of said jack applied to the stressed cable through said hook means. Grade et al. teaches that the utilization of hooks as in elements 24 and 58 to secure cables, which are subjected to a force in measuring devices, is commonly known. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the Wire Tension Meter of Proceq utilizing the teachings of the tension-indicating device of Grade et al. by utilizing well known means to secure and subject the cable to a force in a reliable and efficient manner.
- With respect to claims 6, 13 and 17, Proceq teaches said measuring means includes a gauge as noted in the top Figure in Page 2, but he does not teach it being mounted onto said frame. Grade et al. teaches a tension-indicating device that comprises a gauge 22 mounted onto the frame of his structure. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the Wire Tension Meter of Proceq utilizing the teachings of the tension-indicating device of Grade et al. by utilizing and rearranging well known means to measure or indicate measurement values in order to make said device smaller and easily portable.

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- With respect to claims 12 and 16, Proceq teaches the jack applying a pre-set force to the stressed cable as noted in the top Figure in Page 2 ("Wire force remains unchanged...").
- With respect to claims 14 and 18, Proceq teaches a frame having the shape of a "V" as noted in the Figure of Page 1.

Response to Arguments

4. Applicant's arguments with respect to claims 1-3,5-10,12-13,15-20 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments have been fully addressed by the above presented office action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (571)272-2182. The examiner can normally be reached on 9:00 AM to 5:30 PM.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571)272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CM

Lilybett Martir
Examiner
Art Unit 2855



EDWARD LEIKOWITZ
SUPERVISORY PATENT EXAMINER
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LCM